

# Work Order ID 62744



Page 1

Thursday, October 07, 2010 1:26:48 PM

Item ID: D206-667-103

Accept



Setup Start



Revision ID:

Stop



Item Name: Crosstube Fwd

Start Date: 10/7/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 10/27/2010 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: ✓ Date: 10-10-07 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

| Draw Nbr     | Revision Nbr |
|--------------|--------------|
| D206-667-143 | Rev C        |

100 0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile and create labels as per PPP D206-667-103 CHG004

*S 10/14/07*

110 0.00



Pick Kit

Packaging

Packaging

Memo

0.00

Packaging

*EL 10-10-26 (X1)*

120 0.00



BENDING MACHINE - CROSSTUBES

CNC Bend 2

Memo

0.00

CNC Alpha 160 Bender

Bend tube as per Dwg D206-667-143 using CNC bender program

*EL 10-10-26 (X1)*

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

**Work Order ID 62744**

Page 3

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Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

140



Crosstubes

Crosstubes

0.00

0.00

**Memo**

1-Drill holes &amp; ream using drill Jig DT8541 &amp; DT8542 as per Dwg D206-667-143. Drill all (3) top holes.

3-Flip tube and switch drilling Jigs from right to left, left to right. Locate Jigs off existing holes using "T" pins.

4-Drill pilot holes using drill Jig DT8541 &amp; DT8542 as per Dwg D206-667-143. Drill only the top (2) holes.

5-Drill pilot holes as per Dwg D206-667-143. Drill only the top (2) holes.

6-Drill Fwd rivet holes using drill Jig DT8787FWD as per Dwg D206-667-143. Note: Fwd side has 3x top holes.

7-Drill Aft rivet holes using drill Jig DT8787AFT as per Dwg D206-667-141.

8-C'sink holes as per Dwg D206-667-143. Allow rivet to sit below surface to compensate for paint.

9 -Scribe part # and batch # using vibrating stylus as per Dwg D206-667-143 Inside of Cuff (Do not engrave on outside of tube)

10-Deburr &amp; Inspect for surface damage. Repair damage within limits as per Dwg D206-667-143

500  
10-7-10-26

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

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|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

**Work Order ID 62744**

Thursday, October 07, 2010 1:26:49 PM

Page 4

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Run Start

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

150

Crosstubes Chemical Conversion

0.00



HandFXtube

Memo

0.00

SAD  
10-10-27

①

Hand Finishing Crosstubes

160

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

S 10/10/28

Quality Control

170

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

S 10/10/28

⑩

Quality Control

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

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|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

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**Work Order ID 62744**

Thursday, October 07, 2010 1:26:49 PM

Page 5

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Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

180

Outsource process - NDT per QSI038 4.1

0.00

7/10/12828

CL 10/10/28 (1)



Outsource2

Memo

0.00

Outsource process - NDT

CROSSTUBES

190

Packaging

0.00



Packaging

Memo

0.00

Packaging

Ensure copy of NDT results attached to work order.

CL 10/14/28 (1)

200

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

CL 10 10 29 (1)

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
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|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

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|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries



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Page 6

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Customer:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

Stop

| Sequence ID/<br>Work Center ID | Operation<br>Description  | Set Up/<br>Run Hours  | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|---------------------------|---|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 210                            | SprayPaint                | 0.00  |         |        |              |               |               |                  |                |
|                                | SprayPaint                | Memo  |         |        |              |               |               |                  |                |
|                                | Spray Painting            | 1-Prime inside and outside crosstube as per QSI 005 4.2       |         |        |              |               |               |                  |                |
|                                |                           | 2-Paint outside crosstube with White Imron as per QSI 005 4.2 |         |        |              |               |               |                  |                |
|                                |                           | PRIME:  |         |        |              |               |               |                  |                |
|                                |                           | Start Time: 7:00  |         |        |              |               |               |                  |                |
|                                |                           | Finish Time: 8:00   |         |        |              |               |               |                  |                |
|                                |                           | PAINT:  |         |        |              |               |               |                  |                |
|                                |                           | Start Time: 12:00   |         |        |              |               |               |                  |                |
|                                |                           | Finish Time: 1:00   |         |        |              |               |               |                  |                |
| 220                            | QC14- Inspect Spray Paint | 0.00  |         |        |              |               |               |                  |                |
|                                | QC                        | Memo  |         |        |              |               |               |                  |                |
|                                | Quality Control           | Wrap in plastic bag to protect from scratches                 |         |        |              |               |               |                  |                |

# Dart Aerospace Ltd

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
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|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

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Thursday, October 07, 2010 1:26:49 PM

Page 7

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Run Start

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

230

0.00



Crosstubes

Crosstubes

Memo

0.00

(ASSEMBLE AS PER DWG D206-667-143)

1-Install support using 0.03" to 0.06" thick layer of magnobond 6398 per QSI

015. Let cure for 12h after installation and prior to packaging. Note: (2) Aft holes should be facing up.

A/R Magnobond 6398 : 115580 exp: 07/2011

2-Install supports and clamps as per Dwg D206-667-143. Torque clamps to 80-100 in lb

3-Install nut plates as per Dwg D206-667-143. Touch-up rivet heads with Imron paint.

ml 10 11 01 (1)

> ml 10.11.02 (1)

240

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

8.10.10/02

(tu) \_\_\_\_\_

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

**Work Order ID 62744**

Page 8

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Stop

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Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

250

Pick Kit

0.00



Packaging

Memo

0.00

Packaging

10/11/35

260

QC4- 100% Inspect kits for completeness

0.00



QC

Memo

0.00

Quality Control

8/10/1/9

40

270

Packaging

0.00



Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPP D206-667-103

Location: 63PPP Rev: 0

10/11/35

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
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|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

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|      |      |                                  |                                |                                 |                |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |

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Page 9

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Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

280

QC21 - Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

ck 10/11/03 [Signature]  
MF  
10-11-3

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
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|      |      |                    |    |      |     |                                     |                          |

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|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries



# Picklist Print

Thursday, October 07, 2010 1:26:52 PM

Page 1

Work Order ID: 62744

Parent Item: D206-667-103

Parent Item Name: Crosstube Fwd



Start Date: 10/7/2010

Required Date: 10/27/2010

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:F 05.09.01 Add holes for compatibility with Bell Skidtubes KJ/JLM  
 IPP Rev:G 08-06-03 update as per DSI9415 (ECN1198) DD verified by:  
 IPP Rev: H 08.11.17 QC5 was QC6 at step 12 KJ verified by: EC  
 IPP Rev:I 08-12-15 add magnobond DD verified by:EC  
 IPP Rev J 09.01.06 ECN 08-562 EC verified by: DD  
 IPP Rev:K 09-01-19 as per DSI9439 DD verified by:EC

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|

|                           |  |              |    |  |  |     |      |        |   |   |  |  |  |
|---------------------------|--|--------------|----|--|--|-----|------|--------|---|---|--|--|--|
| D206-667-103TRN           |  | Manufactured | No |  |  | 110 | Each | 2.0000 | 1 | 1 |  |  |  |
|                           |  |              |    |  |  |     |      |        |   |   |  |  |  |
| Crosstube Turning DetailL |  |              |    |  |  |     |      |        |   |   |  |  |  |

B 63017

| Location | Loc Qty | Loc Code |
|----------|---------|----------|
| LG       | 2       |          |
| 61426    | 1       |          |
| 61428    | 1       |          |

|                    |  |              |    |  |  |     |      |         |   |   |  |  |  |
|--------------------|--|--------------|----|--|--|-----|------|---------|---|---|--|--|--|
| D2873-043          |  | Manufactured | No |  |  | 230 | Each | 16.0000 | 2 | 2 |  |  |  |
|                    |  |              |    |  |  |     |      |         |   |   |  |  |  |
| Nut Plate Assembly |  |              |    |  |  |     |      |         |   |   |  |  |  |

| Location | Loc Qty | Loc Code |
|----------|---------|----------|
| ST       | 16      |          |
| 60981    | 16      |          |

|                    |  |              |    |  |  |     |      |         |   |   |  |  |  |
|--------------------|--|--------------|----|--|--|-----|------|---------|---|---|--|--|--|
| D2873-045          |  | Manufactured | No |  |  | 230 | Each | 14.0000 | 2 | 2 |  |  |  |
|                    |  |              |    |  |  |     |      |         |   |   |  |  |  |
| Nut Plate Assembly |  |              |    |  |  |     |      |         |   |   |  |  |  |

| Location | Loc Qty | Loc Code |
|----------|---------|----------|
| LG       | 14      |          |
| 60982    | 14      |          |

EC 10-10-26.

mm 10-11-02

mm 10-11-02

**Dart Aerospace Ltd**

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

# Picklist Print

Thursday, October 07, 2010 1:26:52 PM

Page 2

Work Order ID: 62744



Parent Item: D206-667-103



Parent Item Name: Crosstube Fwd

Start Date: 10/7/2010

Required Date: 10/27/2010

Start Qty: 1.00

Required Qty: 1.00

D2891-1 Manufactured No

230 Each

53.0000

2 2



2.25 Support



*ml 10-11-02*

| Location | Loc Qty | Loc Code |
|----------|---------|----------|
| LG       | 53      |          |
| 46159    | 7       |          |
| 50952    | 18      |          |
| 53773    | 20      |          |
| 55786    | 8       |          |

D3595-063-395 Manufactured No

230 Each

14.0000

4 4



RUBBER CUSHION

*D 3595 083 450 B# 61465*

*cut to length*

| Location | Loc Qty | Loc Code |
|----------|---------|----------|
| FP       | 10      |          |
| 44667    | 10      |          |
| ST       | 4       |          |
| 60585    | 4       |          |



*ml 10-11-01*

RUBBER CUSHION .63" x 3.95" (4)

MS20601-AD4W8

Purchased No

230 Each

274.0000

14 14



RIVET



*ml 10-01-02*

| Location | Loc Qty | Loc Code |
|----------|---------|----------|
| LG       | 100     |          |
| 115855   | 100     |          |
| ST322    | 174     |          |
| 108521   | 70      |          |
| 112203   | 104     |          |

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

# Picklist Print

Thursday, October 07, 2010 1:26:52 PM

Page 3

Work Order ID: 62744

Parent Item: D206-667-103

Parent Item Name: Crosstube Fwd

Start Date: 10/7/2010

Required Date: 10/27/2010

Start Qty: 1.00

Required Qty: 1.00

MS21920-20

Purchased No

230 Each

85.0000

4 4



Clamp (per MIL-DTL-8783C)

Location

Loc Qty

Loc Code

LG

85

112624

2

114687

1

114779

6

115057

26

115736

50

AN5-30A

Purchased No

250 Each

78.0000

4 4



BOLT

Location

Loc Qty

Loc Code

ST339

78

112933

3

114437

25

114941

50

AN5-32A

Purchased No

250 Each

300.0000

4 4



Bolt

Location

Loc Qty

Loc Code

ST340

300

114056

40

114405

50

115016

50

115108

50

115589

60

115698

50

Thursday, October 07, 2010 1:26:52 PM

Shop Packet Print

Page 3

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

# Picklist Print

Thursday, October 07, 2010 1:26:52 PM

Page 4

Work Order ID: 62744

Parent Item: D206-667-103

Parent Item Name: Crosstube Fwd

Start Date: 10/7/2010

Required Date: 10/27/2010

Start Qty: 1.00

Required Qty: 1.00

AN5-7A  
Bolt

Purchased No

250 Each

131.0000

10 10



M115936 10/11/38

## Location

## Loc Qty

## Loc Code

ST337

131

113149

131

AN960JD516  
Washer

NAS1149D0563J

Purchased No

250 Each

34.0000

18 18



M114742 10/11/38

## Location

## Loc Qty

## Loc Code

ST

34

103694

18

107534

12

109287

4

AN970-4  
Washer

Purchased No

250 Each

82.0000

12 12



10/11/38

## Location

## Loc Qty

## Loc Code

ST349

82

115531

32

115621

50

MS21042L5  
Nut

Purchased No

250 Each

895.0000

4 4



10/11/38

## Location

## Loc Qty

## Loc Code

ST139

26

114813

26

ST300

869

115156

369

115594

500

Thursday, October 07, 2010 1:26:52 PM

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Page 4

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

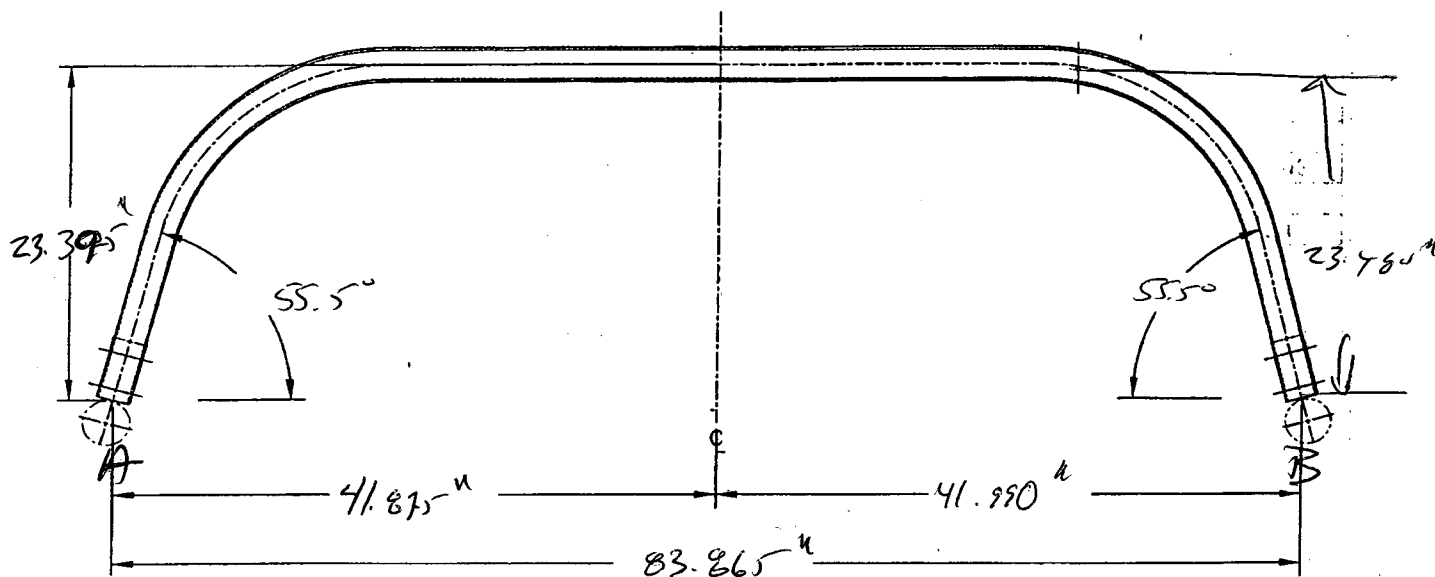
| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries



|   |                                  |
|---|----------------------------------|
| <b>DART AEROSPACE LTD</b>                         | <b>Work Order:</b> 427221        |
| <b>Description:</b> Crosstube High Fwd (206L)     | <b>Part Number:</b> D206-667-103 |
| <b>Inspection Dwg:</b> D206-667-143 <b>Rev:</b> C | <b>Page 1 of 1</b>               |

| Required Dimension | Min   | Max   |
|--------------------|-------|-------|
| Height             | 23.39 | 23.65 |
| 1/2 Span           | 41.79 | 42.05 |
| Angle              | 54    | 56    |
| Total Span         | 83.58 | 84.10 |



| Comments |
|----------|
|          |
|          |
|          |
|          |

|                 |          |
|-----------------|----------|
| QC15 Inspection | S        |
| Date            | 10/10/26 |

| Rev | Date     | Change                           | Revised by | Approved |
|-----|----------|----------------------------------|------------|----------|
| A   | 07.02.06 | New Issue                        | KJ/JM      |          |
| B   | 09.06.26 | Dimensions updated per Dwg Rev C | KJ         |          |
| C   | 09.10.22 | Minimum height dimension revised | KJ         |          |

41.875  
41.990  
83.865

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

| Item | Qty<br>-143 | Part Number    | Description  |
|------|-------------|----------------|--|
| 1    | X           | D206-667-143   | CROSSTUBE ASSEMBLY (206L HIGH FWD)   |
| 2    | 1           | D6002-115      | CROSSTUBE  |
| 3    | 2           | D2873-043      | NUT PLATE  |
| 4    | 2           | D2873-045      | NUT PLATE  |
| 5    | 2           | D2891-1        | SUPPORT  |
| 6    | 4           | D3595-063-395  | RUBBER CUSHION   |
| 7    | 4           | MS21920-20     | CLAMP (OR MS21920-21)  |
| 8    | 14          | MS20601AD4W8   | RIVET (OR NAS9302B-4-8)  |
| 9    | A/R         | MAGNOBOND 6398 | ROCKWELL SPECIFICATION RBO-120-023<br>ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE) |

# **GENERAL NOTES:**

- 1) MATERIAL: MANUFACTURED FROM D6002-115  
FINISHED LENGTH = 104.98±0.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D206-667-143" AND BATCH NUMBER ON INSIDE OF CUFF USING VIBRATING STYLUS.
- 7) WEIGHT: 15.5 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN CUTTER OFF PART WHERE INDICATED. BLEND OUT EDGE LONGITUDINALLY. TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 10 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2891-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS21920-20 CLAMPS (OR -21) WITH D3595-063-395 RUBBER CUSHIONS TO SECURE THE D2891-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMP MECHANISMS ARE LOCATED ON CROSSTUBE SUPPORTS.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AGREEMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 02744  
BS 10-10-07

RELEASED  
08/11/06

|            |  |  |              |
|------------|--|--|--------------|
| C          | REVISE GENERAL NOTES/PART LIST (ZN D7-1); REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS.<br>D3595-063-395 WAS D2856-400-694 (ZN D6-2 & A5-2); REMOVED REF. & ADD TOLERANCE (ZN D3-3, C4-3, C5-3); RELOCATED FLAG #6 (ZN A8-3) PER NCR 210; MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4. | RF   | 08.11.06     |
| B          | ADD HOLES AND NUT PLATES FOR COMPATABILITY WITH BHT/AA SKUDTUBES   | PH   | 05.07.26     |
| A          | NEW ISSUE  | CP   | 00.11.17     |
| REV.       | DESCRIPTION  | BY   | DATE         |
| DESIGN     | <u>JP</u>  | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA   |              |
| DRAWN      | <u>RF</u>  |  |              |
| CHECKED    | <u>JP</u>  | DRAWING NO.  | REV. C       |
| MFG. APPR. | <u>JP</u>  | D206-667-143   | SHEET 1 OF 4 |
| APPROVED   | <u>JP</u>  | TITLE  | SCALE        |
| DE APPR.   | <u>JP</u>  | CROSSTUBE ASS'Y (206L HIGH FWD)  | NTS          |
| DATE       | 08.11.06   | COPYRIGHT © 2006 BY DART AEROSPACE LTD<br>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD. |              |

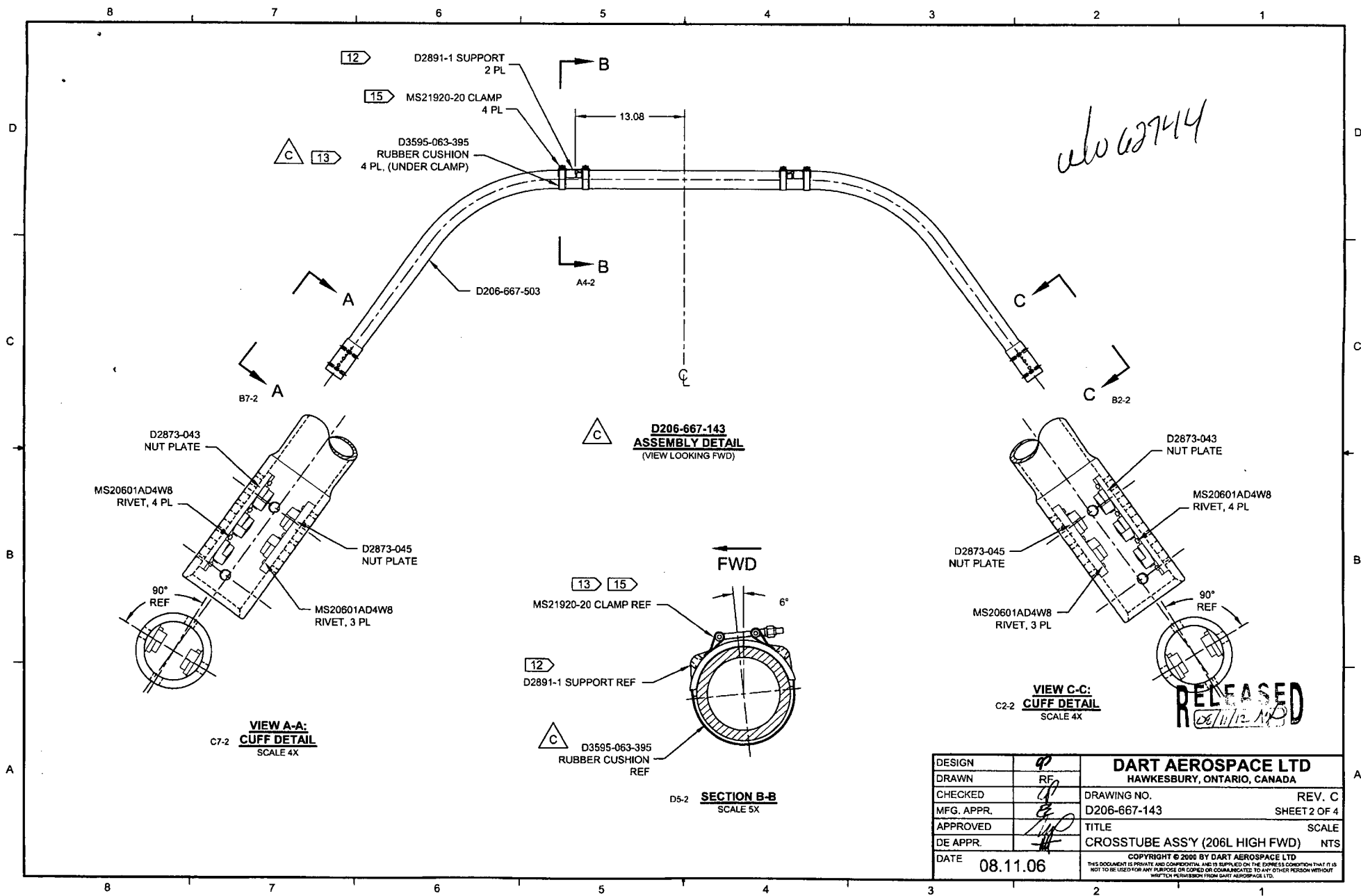
| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes/ No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries



| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

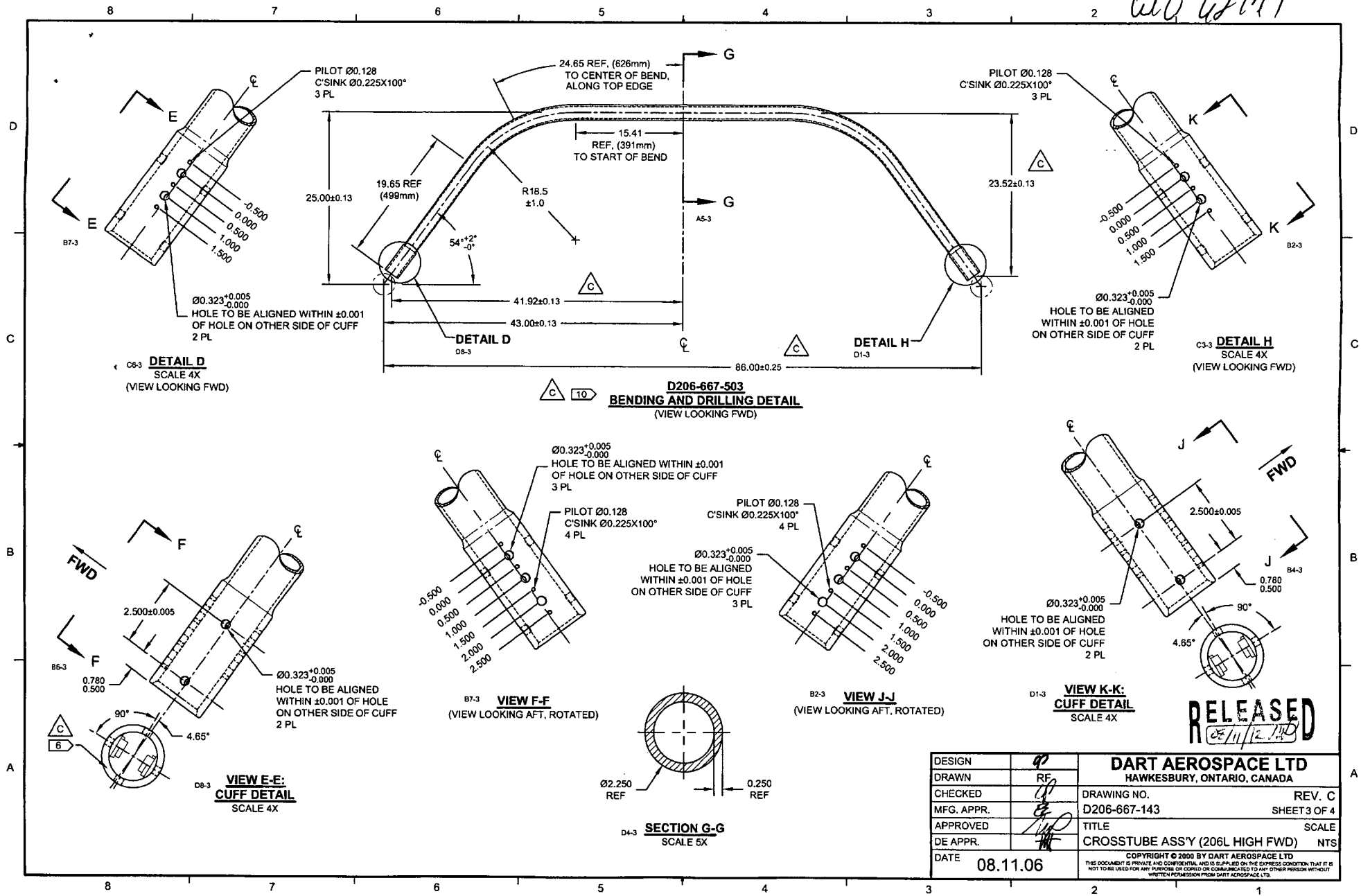
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

ULO 42744



|            |          |  |              |
|------------|----------|--|--------------|
| DESIGN     | DP       | <b>DART AEROSPACE LTD</b>  |              |
| DRAWN      | RF       | HAWKESBURY, ONTARIO, CANADA  |              |
| CHECKED    | DP       | DRAWING NO.  | REV. C       |
| MFG. APPR. | DP       | D206-667-143   | SHEET 3 OF 4 |
| APPROVED   | DP       | TITLE  | SCALE        |
| DE APPR.   | DP       | CROSSTUBE ASS'Y (206L HIGH FWD)  | NTS          |
| DATE       | 08.11.06 | <small>COPYRIGHT © 2000 BY DART AEROSPACE LTD<br/>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small> |              |

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

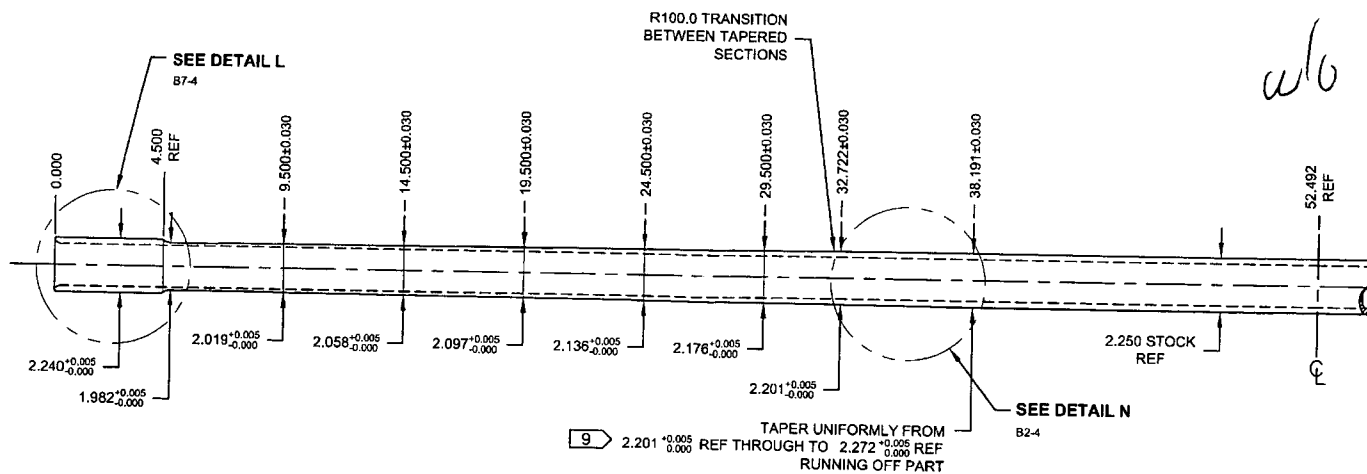
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

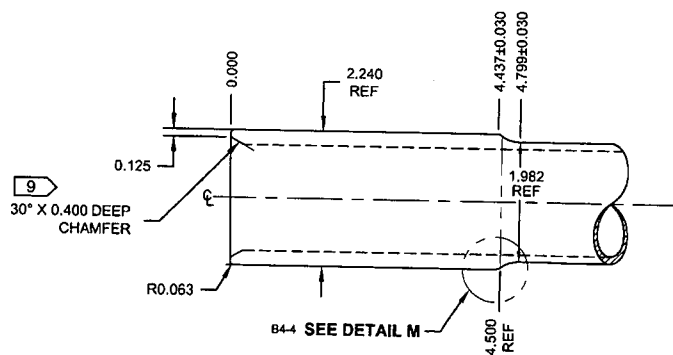
| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

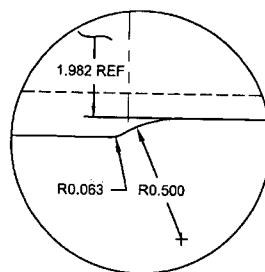




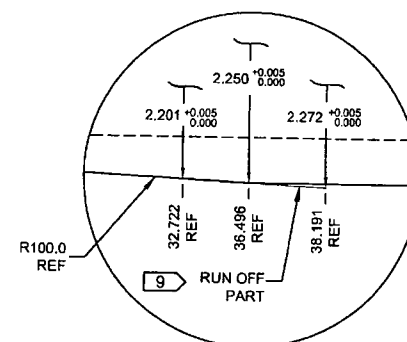
**C TURNING DETAIL**



**DETAIL L:  
CROSSTUBE CUFF**  
NOT TO SCALE



**DETAIL M:  
CUFF TRANSITION**  
NOT TO SCALE



**DETAIL N:  
TAPER RUN-OFF**  
NOT TO SCALE

**RELEASED**

|  |          |  |              |
|--|----------|--|--------------|
| DESIGN   | 9        | <b>DART AEROSPACE LTD</b>              |              |
| DRAWN  | RF       | HAWKESBURY, ONTARIO, CANADA            |              |
| CHECKED  | RF       | DRAWING NO.                            | REV. C       |
| MFG. APPR.   | RF       | D206-667-143                           | SHEET 4 OF 4 |
| APPROVED   | RF       | TITLE                                  | SCALE        |
| DE APPR.   | RF       | CROSSTUBE ASSY (206L HIGH FWD)         | NTS          |
| DATE   | 08.11.06 | COPYRIGHT © 2000 BY DART AEROSPACE LTD |              |
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## WORK ORDER CHANGES

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |  |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|--|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC/Inspector |  |
|      |      |                    |    |      |     |                                     |                          |  |
|      |      |                    |    |      |     |                                     |                          |  |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

## WORK ORDER NON-CONFORMANCE (NCR)

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

## 5.0 PARTS LIST

| Item | Qty<br>-011 | Qty<br>-013 | Qty<br>-015 | Qty<br>-101 | Qty<br>-201 | Qty<br>-103 | Qty<br>-203 | Qty<br>-105 | Qty<br>-205 | Part Number   | Description  |
|------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|--|
|      | X           |             |             |             |             |             |             |             |             | D206-667-011  | SPACER BLOCK KIT                                     |
|      |             | X           |             |             |             |             |             |             |             | D206-667-013  | NUT PLATE KIT (-101/-103/-105/-203/-205)             |
|      |             |             | X           |             |             |             |             |             |             | D206-667-015  | NUT PLATE KIT (-201)                                 |
|      |             |             |             | X           |             |             |             |             |             | D206-667-101  | CROSSTUBE INSTALLATION,<br>206A/B HIGH FWD           |
|      |             |             |             |             | X           |             |             |             |             | D206-667-201  | CROSSTUBE INSTALLATION,<br>206A/B HIGH AFT           |
|      |             |             |             |             |             | X           |             |             |             | D206-667-103  | CROSSTUBE INSTALLATION,<br>206L/L-1/L-3/L-4 HIGH FWD |
|      |             |             |             |             |             |             | X           |             |             | D206-667-203  | CROSSTUBE INSTALLATION,<br>206L/L-1/L-3/L-4 HIGH AFT |
|      |             |             |             |             |             |             |             | X           |             | D407-667-105  | CROSSTUBE INSTALLATION, 407 HIGH FWD                 |
|      |             |             |             |             |             |             |             |             | X           | D407-667-205  | CROSSTUBE INSTALLATION, 407 HIGH AFT                 |
| 1    |             |             |             | 1           |             |             |             |             |             | D206-667-141  | CROSSTUBE ASSEMBLY, 206A/B HIGH FWD                  |
| 2    |             |             |             |             | 1           |             |             |             |             | D206-667-241  | CROSSTUBE ASSEMBLY, 206A/B HIGH AFT                  |
| 3    |             |             |             |             |             | 1           |             |             |             | D206-667-143  | CROSSTUBE ASSEMBLY,<br>206L/L-1/L-3/L-4 HIGH FWD     |
| 4    |             |             |             |             |             |             | 1           |             |             | D206-667-243  | CROSSTUBE ASSEMBLY,<br>206L/L-1/L-3/L-4 HIGH AFT     |
| 5    |             |             |             |             |             |             |             | 1           |             | D407-667-145  | CROSSTUBE ASSEMBLY, 407 HIGH FWD                     |
| 6    |             |             |             |             |             |             |             |             | 1           | D407-667-245  | CROSSTUBE ASSEMBLY, 407 HIGH AFT                     |
| 10   |             |             |             | *2          | *2          | *2          |             | *2          |             | D2891-1       | SUPPORT  |
| 11   |             |             |             |             |             |             | *2          |             |             | D2892-1       | SUPPORT  |
| 12   |             |             |             |             |             |             |             |             | *1          | D2894-1       | SUPPORT  |
| 13   |             |             |             | *2          | *2          | *2          |             | *2          |             | D2856-400-694 | ABRASION STRIP                                       |
| 14   |             |             |             |             |             |             | *2          |             | *2          | D2856-400-773 | ABRASION STRIP                                       |
| 15   |             |             |             |             |             |             |             |             | *1          | D2856-600-851 | ABRASION STRIP                                       |
| 16   |             |             |             | *4          | *4          | *4          |             | *4          |             | MS21920-20    | CLAMP  |
| 17   |             |             |             |             |             |             | *4          |             | *4          | MS21920-22    | CLAMP  |
| 18   |             |             |             |             |             |             |             |             | *2          | MS21920-24    | CLAMP  |
| 19   |             |             |             | 4           | 4           | 4           |             | 4           |             | AN5-32A       | BOLT   |
| 20   |             |             |             |             |             |             | 4           |             | 4           | AN5-34A       | BOLT   |
| 21   |             |             |             | 4           | 4           | 4           | 4           | 4           | 4           | MS21042L5     | NUT (OR MS21042-5)                                   |
| 22   |             |             |             | 8           | 8           | 8           | 8           | 8           | 8           | AN960JD516    | WASHER   |
| 23   |             |             |             |             |             |             |             |             | *2          | D3190-1       | CHAFING SHIELD                                       |
| 30   | 8           |             |             |             |             |             |             |             |             | AN4-6A        | BOLT   |
| 31   | 8           |             |             |             |             |             |             |             |             | AN4-7A        | BOLT   |
| 32   | 16          |             |             |             |             |             |             |             |             | AN960JD416    | WASHER   |
| 33   | 2           |             |             |             |             |             |             |             |             | D3193-041     | SPACER BLOCK ASSEMBLY                                |
| 40   |             | 2           |             | *2          |             | *2          | *2          | *2          | *2          | D2873-043     | NUT PLATE  |
| 41   |             | 2           |             | *2          |             | *2          | *2          | *2          | *2          | D2873-045     | NUT PLATE  |
| 42   |             |             | 2           |             | 2           |             |             |             |             | D2872-043     | NUT PLATE  |
| 43   |             |             | 2           |             | 2           |             |             |             |             | D2872-045     | NUT PLATE  |
| 44   |             | 10          |             | 10          |             | 10          |             |             |             | AN5-7A        | BOLT   |
| 45   |             | 10          | 10          |             | 10          |             | 10          | 10          | 10          | AN5-10A       | BOLT   |
| 46   |             | 4           | 4           | 4           | 10          | 4           |             | 4           |             | AN5-30A       | BOLT   |
| 47   |             | 4           |             |             |             |             | 4           |             | 4           | AN5-32A       | BOLT   |
| 48   |             | 18          | 18          | 10          | 12          | 10          | 10          | 10          | 10          | AN960JD516    | WASHER   |
| 49   |             | 4           | 4           |             | 6           |             |             |             |             | MS21042L5     | NUT (OR MS21042-5)                                   |

\*REFERENCE ONLY. PARTS ARE INCLUDED IN D206-667-141/241/143/243, & D407-667-145/245 ASSEMBLIES ABOVE

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Revision: C

Date: 05.07.26

# DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D206-667 REV. C  
AND INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D206-667 REV. 2

REF CANADIAN STC: SH01-5  
REF FAA STC: SR01304NY  
REF EASA STC: EASA.IM.R.S.01179

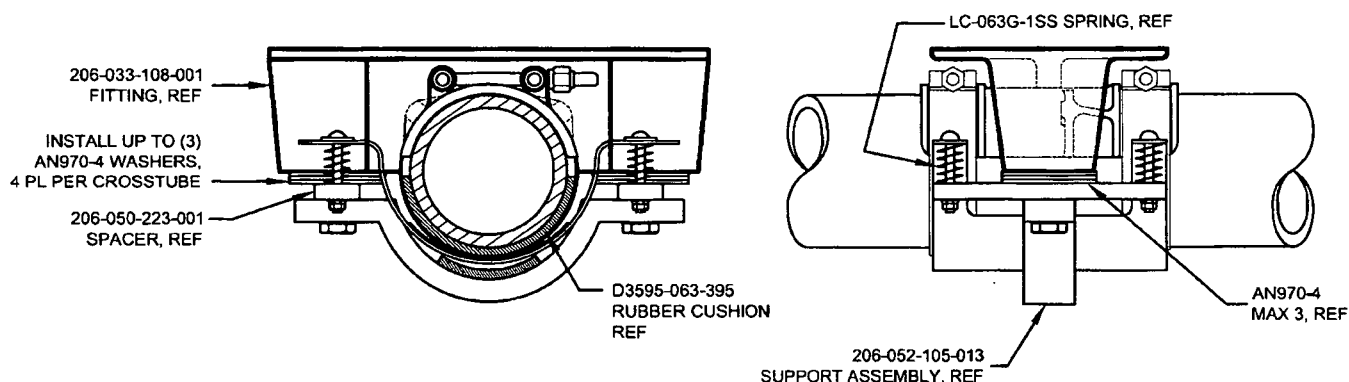
REFERENCE ONLY

## PROBLEM:

FOR D206-667-103 CROSSTUBES (206L FWD) AT CHG 003 AND SUBSEQUENT (SEE DSI 9415) PROPER INSTALLATION OF THE OEM SUPPORT ASSEMBLIES MAY BE IMPOSSIBLE DUE TO THE ADDITIONAL THICKNESS OF THE DART D3595-063-395 RUBBER CUSHIONS. THE 206-052-105-013 SUPPORT ASSEMBLY (OR EQUIVALENT) MAY SIT TOO HIGH RELATIVE TO THE 206-033-108-001 FITTING, CAUSING THE LC-063G-1SS SPRING (OR EQUIVALENT) TO BE OVERLY COMPRESSED.

## SOLUTION:

IT IS ACCEPTABLE TO LOWER THE SUPPORT ASSEMBLY BY INSTALLING UP TO QTY (3) AN970-4 WASHERS BETWEEN THE 206-033-108-001 FITTING (OR EQUIVALENT) AND THE 206-050-223-001 SPACER (OR EQUIVALENT). SEE FIGURE BELOW FOR REFERENCE.



## CROSSTUBE SECTION: SUPPORT DETAIL

## PARTS LIST:

THE FOLLOWING PARTS HAVE BEEN INCLUDED WITH D206-667-103 CROSSTUBES AT CHG 004 AND SUBSEQUENT

| ITEM | Qty<br>-103 | PART NUMBER | DESCRIPTION |
|------|-------------|-------------|-------------|
| 60   | 12          | AN970-4     | WASHER      |

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

APPROVED

BY: *[Signature]*  
D. SHEPHERD (DE # 02)

DATE: 08.12.17  
CERT. NO.: SH01-5  
ISSUE NO.: 3

|            |                    |  |              |
|------------|--------------------|--|--------------|
| A          | NEW ISSUE          | CP   | 08.12.17     |
| REV.       | DESCRIPTION        | BY   | DATE         |
| DESIGN     | <i>q2</i>          | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA   |              |
| DRAWN      | <i>q2</i>          |  |              |
| CHECKED    | <i>PH</i>          | DRAWING NO.  | REV. A       |
| MFG. APPR. | N/A                | DSI 9439   | SHEET 1 OF 1 |
| APPROVED   | <i>[Signature]</i> | TITLE  | SCALE        |
| DE APPR.   | <i>[Signature]</i> | 206L FWD XTUBE SUPPORT MOD.  | NTS          |
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## LIQUID PENETRANT TEST REPORT

P- 15032

PAGE 1 OF 1

CLIENT Dart Aerospace DATE Oct 28 2010 TIME AM ☒ PM ☐  
ATTENTION Linda Laccelle ACUREN JOB NO. 188-10-0933  
ADDRESS 1270 Aberdeen St. POWO No. 12828  
Hawkesbury WORK LOCATION Hawkesbury  
ACCEPTANCE STD. ASTM 1413/81-C38 REV./DATE 2005  
PROJECT x-Tubes # D206-667-103 & D206-667-103 BL  
ITEM(S) EXAMINED Job #s: 62310, 62743, 62744, 62600, 62601

|  |   |  |   |
|--|---|--|---|
| JOB DESCRIPTION  |   | PROCEDURE NO. <u>LT-6002</u> REV./DATE   | TECHNIQUE NO. <u>LT-TECH 62</u> REV./DATE |
| PART NO. <u>D206-667-103 &amp; D206-667-103 BL</u>   | MATERIAL <u>ALODINED ALUM.</u> THICKNESS <u>10A</u> |  |   |
| SCOPE <u>WET FLOURESCENT LIQUID PENETRANT INSPECTION CARRIED OUT ON 100% EXTERNAL SURFACE OF THE X-TUBES</u>                 |   |  |   |
| TEST DETAILS   |   |  |   |
| METHOD <input checked="" type="checkbox"/> FLUORESCENT <input type="checkbox"/> VISIBLE                                      |   | <input checked="" type="checkbox"/> WATER WASH <input type="checkbox"/> SOLVENT REMOVABLE <input type="checkbox"/> POST EMULSIFIED           |   |
| FAMILY BRAND <u>MagnaFluor</u>   |   | BLACK LIGHT S/N <u>8178</u> <input type="checkbox"/> OUTPUT > 1000 $\mu$ W/cm <sup>2</sup> <input type="checkbox"/> AMBIENT < 2 fc           |   |
| PENETRANT <u>ZL67</u>  | MINIMUM DWELL TIME <u>10-15</u> MIN.                | LIGHTING EQUIP. <input type="checkbox"/> FLASHLIGHT <input type="checkbox"/> TROUBLELIGHT <input type="checkbox"/> OUTPUT > 100 fc @ SURFACE |   |
| PENETRANT REMOVER <u>H<sub>2</sub>O</u>  | MINIMUM DRY TIME <u>&gt;10</u> MIN.                 | OTHER <u>call Oct 15th 2010</u>  |   |
| DEVELOPER <u>SKD 52</u>  | MINIMUM DWELL TIME <u>10</u> MIN.                   | LIGHT METER S/N  |   |
| DEVELOPER TYPE <input checked="" type="checkbox"/> NON AQUEOUS <input type="checkbox"/> AQUEOUS <input type="checkbox"/> DRY |   | CAL DUE DATE <u>Apr 7 2011</u>   |   |

|  |  |  |  |
|--|--|--|--|
| TEST SURFACE   |  |  |  |
| SURFACE CONDITION <input checked="" type="checkbox"/> AS GROUND <input type="checkbox"/> AS WELDED <input checked="" type="checkbox"/> MACHINED <input type="checkbox"/> SHOT BLASTED <input checked="" type="checkbox"/> CLEAN BARE METAL |  |  |  |
| SURFACE TEMPERATURE <input type="checkbox"/> < -4°C/ 20°F <input type="checkbox"/> -4°C/ 20°F TO 10°C/50°F <input checked="" type="checkbox"/> 10°C/50°F TO 52°C/125°F <input type="checkbox"/> > 52°C/125°F                               |  |  |  |

RESULTS- (☐ METRIC ☐ IMPERIAL)

WET FLOURESCENT LIQUID  
PENETRANT INSPECTION CARRIED  
OUT ON 100% EXTERNAL SURFACE  
ON X-TUBES:

Job #s: 62310: Acceptable  
62743: Acceptable  
62744: Acceptable  
62600: Acceptable  
62601: Acceptable

10 TO 29

**Scope of Services**  
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**Standard of Care**  
In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

## SIGNATURES

|   |   |   |                     |
|---|---|---|---------------------|
| CLIENT REPRESENTATIVE <u>Matt Murdoch</u>       | PRINT   | SIGNATURE   | DTR # <u>E63201</u> |
| TECHNICIAN (SIGNATURE): <u>Fredrick Chanson</u> | 1 <sup>st</sup> TECHNICIAN  | 2 <sup>nd</sup> TECHNICIAN  | REPORT REVIEWED BY: |
| NAME (PRINT): <u>FREDRICK CHANSON</u>           | CGSB LEVEL <u>#</u> SNT LEVEL <u>#</u> CGSB REG. No. <u>10560</u> | CGSB LEVEL <u>#</u> SNT LEVEL <u>#</u> CGSB REG. No. <u>10560</u> | NAME INITIALS       |

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PT Sept 2005